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ABSTRACT

The digest explores the nature of the creative process. It begins with background information which notes the importance of seeing the familiar in a new light and the possibility on non-acceptance of the creative act. Four basic abilities necessary for creativity and problem solving are identified: (1) fluency, (2) flexibility, (3) elaboration, and (4) originality. Guidelines are offered parents and teachers regarding ways to foster creativity, including allowing flexibility in scheduling, listening to and encouraging all ideas and suggestions, looking for ways to integrate interests, and providing a variety of materials with which to experiment. Four basic rules are set forth: defer judgment, generate many ideas for any given situation (both in number and in kind), solicit free thinking, and combine ideas. A list of resources on the topic concludes the digest. (CL)

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DIGEST

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CREATIVITY AND THE CREATIVE PROCESS

An unquestioning acceptance of what already exists often keeps people from being creative. The essence of the creative act is to see the familiar in a new light, to ask, "What if?" For example, the wind had been blowing dust around for millions of years, but not until 1901, when H. C. Booth asked, "What if the wind were used in reverse?" was the vacuum cleaner invented.

Sometimes the creative process leads to totally unexpected results. In the early part of the nineteenth century, the French doctor, Laennec, saw a relationship between sea air and a cure for consumption. He tried to help patients who could not afford a trip to the seashore by spreading seaweed over the hospital floor. Although this turned out to be of no value to the consumptive, it lead to the discovery of iodine.

E. Paul Torrance likens creativity to the Japanese attainment of satori, a sudden enlightenment—comparable, perhaps, to the western concept of "aha." Attaining a satori involves intense devotion, constant practice over a long period of time, concentration and absorption to the exclusion of other things, persistence, dedication, and expertness.

There is nothing in the creative act that guarantees the creative product will be beneficial or useful. Many mechanical inventions on which modern life is based had little or no utility when they were introduced. In fact, at the time of their introduction, most met with ridicule, disapproval, and, sometimes, persecution, for example, the Xerox copying process was available 4 years before a backer could be found.

Abilities Related to the Creative Process

Research suggests there are four basic abilities necessary to creativity and problem solving—fluency, flexibility, elaboration and originality.

- *Fluency*. The ability to retrieve information quickly and in quantity. It is generally measured in the number of different ideas an individual generates in response to a specific problem. For example, a student is asked to list all possible uses for a brick. In listing "paperweight, doorstop, anchor, nutcrusher, etc." the student is demonstrating fluency.
- *Flexibility*. The ability to switch from one kind of thought to another, to transcend the boundaries of given context when solving problems. In the "brick" example above, if the list should include "make book shelves" or "build a pig's house," then other flexible properties of the brick would be brought into play.
- *Elaboration*. The ability to embellish and/or complete an idea. The student who suggests using a brick as a pencil holder may demonstrate elaboration by covering the bottom with felt, painting the brick, and modifying sizes of holes in the brick for different pencils.
- *Originality*. The ability to come up with unique or unusual ideas, concepts or alternatives. Continuing the "brick" example, using a brick to build buildings is not very unusual; however, grinding it up and using the dust as a bird cage liner is an unusual response.

Creativity is a form of divergent thinking, and does not necessarily fit into set patterns or generate correct answers.

Fostering Creativity

Creativity can be fostered both at home and in school. But, for children to risk being creative, they must be in an environment of trust and discovery. A regular school environment that is highly structured and emphasizes only basics may stifle the creative person. In such an environment a highly creative child may misbehave or underachieve. The following points should be kept in mind by parents and teachers.

- Try not to interrupt children when they are deeply involved in a creative activity. Allow projects to be left out so they can be worked on over time.
- Allow some flexibility in scheduling. A rigid schedule can interfere with the creative process.
- Look for ways to integrate interests—creatively gifted people often have many interests.
- Provide a variety of materials to experiment with. Boxes, spools, and plastic containers all make excellent materials for creative activities.
- Listen to and encourage all ideas and suggestions. Give children your attention and help.
- Support and encourage achievement of a skill that requires persistence and practice; for example, piano playing, skating, or painting.
- Beware of peer pressure. The need to conform may inhibit risk-taking behavior.

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There are four basic rules that apply to most activities designed to encourage creative thinking:

- *Defer judgment.* When generating ideas or problem solving, it is inhibiting both to students and to the process itself to impose evaluative or negative judgments on any given idea. Evaluation comes later, when it is necessary to choose among several alternatives in order to actually solve the problem, or to verify the acceptability of an alternative which has been implemented in a solution or strategy.
- *Generate many ideas for any given situation, both in number (fluency) and in kind (flexibility).* The more ideas generated, the larger the base for finding the best solution strategy. In this stage of creative thinking, quantity surpasses quality.
- *Solicit free thinking.* Unusual ideas, bizarre notions, and outlandish scenarios are acceptable and welcome. Any idea that seems implausible may spark a workable one, or one that can be modified into a solution or strategy. Originality and elaboration often surface here as integral components of the creative process.
- *Combine ideas.* When experiencing a creative thinking activity, it is not unusual for one idea to spawn another. Group work often excites such combinations. By joining unlikely ideas, utterly new and original solutions can be brought into being.

RESOURCES

Adams, J. (1974). *Conceptual blockbusting: A guide to better ideas.* San Francisco: W. H. Freeman and Co.

Arieti, S. (1976). *Creativity: The magic synthesis.* New York: Basic Books.

Creativity—a continuing inventory of knowledge (Series #1). (1981). Washington, DC: The Council of Scholars of the Library of Congress.

Feldhusen, J. F., & Treffinger, D. J. (1977). *Teaching creative thinking and problem solving.* Dubuque, IA: Kendall-Hunt Publishing Co.

Getzels, J. W., & Jackson, P. W. (1963). The highly intelligent and highly creative adolescent: A summary of some research findings. In C. W. Taylor and F. Barron (Eds.), *Scientific creativity: Its recognition and development.* New York: Wiley.

Getzels, J. W., & Jackson, P. W. (1975). The study of giftedness: A multidimensional approach. In J. S. Renzulli and W. B. Barbe (Eds.), *Psychology and education of the gifted.* New York: Irvington Publishers.

Khatena, J. (1978). *The creatively gifted child: Some suggestions for parents and teachers.* New York: Vantage Press.

Mackinnon, D. W. (1978). *In search of human effectiveness.* Buffalo, NY: Creative Education Foundation.

May, R. (1975). *The courage to create.* New York: Norton.

Osborn, A. F. (1963). *Applied imagination* (3rd ed.). New York: Scribners.

Parnes, S. J. (1975). *Aha! Insights into creative behavior.* Buffalo, NY: D.O.K. Publishers.

Renzulli, J. S. (1982). Dear Mr. and Mrs. Copernicus: We regret to inform you. *Gifted Child Quarterly, 1*(1).

Torrance, E. P. (1970). *Encouraging creativity in the classroom.* Dubuque, IA: Brown.

Torrance, E. P. (1979). *The search for satori and creativity.* Buffalo, NY: The Creative Education Foundation.

Vernon, P. E. (1976). *Creativity: Selected readings.* New York: Penguin Books.

Willings, D. (1980). *The creatively gifted.* Cambridge, England: Woodhead-Faulkner, Ltd.

OTHER RESOURCES

Journal of Creative Behavior. Published by Creative Educational Foundation, 437 Franklin Street, Buffalo, NY 14202. Books and publications available, as well as creative training conferences for education and business.

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